

**§ 172.110 Survival conditions.**

(a) Paragraphs (c) and (d) of this section apply to a hopper barge and paragraphs (e) through (i) apply to all other tank barges.

(b) A barge is presumed to survive assumed damage if it meets the following conditions in the final stage of flooding:

(c) A hopper barge must not heel or trim beyond the angle at which—

(1) The deck edge is first submerged; or

(2) If the barge has a coaming that is at least 36 inches (91.5 centimeters) in height, the intersection of the deck and the coaming is first submerged, except as provided in paragraph (d) of this section.

(d) A hopper barge must not heel beyond the angle at which the deck edge is first submerged by more than “fa” as defined in § 172.090(c).

(e) Except as provided in paragraphs (h) and (i) of this section, each tank barge must not heel beyond the angle at which—

(1) The deck edge is first submerged; or

(2) If the barge has one or more watertight trunks, the deck edge is first submerged by more than “fa” as defined in § 172.090(c).

(f) Except as provided in paragraphs (h) and (i) of this section, a tank barge must not trim beyond the angle at which—

(1) The deck edge is first submerged; or

(2) If the barge has one or more watertight trunks, the intersection of the deck and the trunk is first submerged.

(g) If a tank barge experiences simultaneous heel and trim, the trim requirements in paragraph (f) of this section apply only at the centerline.

(h) Except as provided in paragraph (i) of this section, in no case may any part of the actual cargo tank top be underwater in the final condition of equilibrium.

(i) If a barge has a “step-down” in hull depth on either or both ends and all cargo tank openings are located on the higher deck level, the deck edge and tank top in the stepped-down area may be submerged.

## Subpart F—Special Rules Pertaining to a Ship That Carries a Hazardous Liquid Regulated Under Subchapter O of This Chapter

**§ 172.125 Specific applicability.**

This subpart applies to each tankship that carries a cargo listed in Table I of part 153 of this chapter, except that it does not apply to a tankship whose cargo tanks are clean and gas free.

**§ 172.127 Definitions.**

*Length* or *L* means load line length (LLL).

**§ 172.130 Calculations.**

(a) Except as provided in § 153.7 of this chapter, each tankship must be shown by design calculations to meet the survival conditions in § 172.150 in each condition of loading and operation assuming the damage specified in § 172.133 for the hull type prescribed in part 153 of this chapter.

(b) If a cargo listed in Table I of part 153 of this chapter is to be carried, the vessel must be at least the hull type specified in part 153 of this chapter for that cargo.

[CGD 79-023, 48 FR 51040, Nov. 4, 1983, as amended by CGD 81-101, 52 FR 7799, Mar. 12, 1987]

**§ 172.133 Character of damage.**

(a) If a type I hull is required, design calculations must show that the vessel can survive damage at any location.

(b) Except as provided in § 153.7 of this chapter, if a type II hull is required, design calculations must show that a vessel—

(1) Longer than 492 feet (150 meters) in length can survive damage at any location; and

(2) Except as specified in paragraph (d) of this section, 492 feet (150 meters) or less in length can survive damage at any location.

(c) If a Type III hull is required, design calculations must show that a vessel—

(1) Except as specified in paragraph (d) of this section, 410 feet (125 meters) in length or longer can survive damage at any location; and